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Riverside County Transportation Commission:
Robin Lowe, Hemet

Ventura County Transportation Commission:
Keith Millhouse, Moorpark

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559-12/28/05

MEETING OF THE

PLANS & PROGRAMS TECHNICAL ADVISORY COMMITTEE

**Tuesday, April 18, 2006
10:00 a.m. – 12:00 p.m.**

**SCAG Offices
818 W. 7th Street, 12th Floor
San Bernardino Conference Room
Los Angeles, CA 90017
(213) 236-1800**

Video Conference Location

SCAG Inland Empire Office
3600 Lime Street, Suite 216
Riverside, CA 92501
(951) 784-1513

Agendas and handouts are provided at www.scag.ca.gov/rtpac. If members of the public wish to review the attachments or have any questions on any of the agenda items, please contact Philip Law at (213) 236-1841 or law@scag.ca.gov.

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PLANS & PROGRAMS TECHNICAL ADVISORY COMMITTEE

AGENDA

ITEM		PAGE #
1.0	<u>Call to Order and Introductions</u>	Chair Doug Kim, LACMTA
2.0	<u>Public Comment Period</u> Members of the public desiring to speak on an agenda item or items not on the agenda, but within the purview of this committee, must fill out a speaker's card prior to speaking and submit it to staff before the meeting is called to order. Comments will be limited to three minutes. The Chair may limit the total time for comments to twenty (20) minutes.	
3.0	<u>Consent Calendar</u>	
3.1	<u>Approval of Meeting Minutes from March 16, 2006</u> <i>Attachment</i>	1
4.0	<u>Action Items</u>	
4.1	<u>RTP Growth Forecast Assumptions</u> <i>Attachment</i> <i>Recommended Action: Approve the Regional Growth Forecast Methodology and Assumptions</i>	Frank Wen, SCAG 7
5.0	<u>Discussion Items</u>	
5.1	<u>Standing Items</u>	
5.1.1	<u>Growth Forecast</u> <i>County-Level Growth Forecast</i>	Frank Wen, SCAG
5.1.2	<u>Highways and Arterials</u> <i>No report</i>	
5.1.3	<u>TDM / Non-Motorized</u> <i>No report</i>	
5.2	<u>OCTA Draft Long Range Transportation Plan</u> <i>Attachment</i>	Richard Marcus, OCTA 21
5.3	<u>RTP Goals, Policies, and Performance</u> <u>Measures</u> <i>Attachment</i>	Tarek Hatata, System Metrics 30



PLANS & PROGRAMS TECHNICAL ADVISORY COMMITTEE

AGENDA

ITEM

PAGE

5.4 SAFETEA-LU Update & Project Submittal Request Naresh Amatya,
SCAG

6.0 **Staff Report**

7.0 **Comment Period**

Any Committee member, member of the public, or staff desiring to comment on items not covered on the agenda may do so at this time. Comments should be limited to three minutes.

8.0 **Next Meeting Date & Adjournment**

The next meeting date is Thursday, May 18, 10 a.m. to 12:00 p.m.



PLANS & PROGRAMS TECHNICAL ADVISORY COMMITTEE

MINUTES for March 16, 2005

The following minutes are a summary of the Plans & Programs Technical Advisory Committee (TAC) meeting. Audio cassette tapes of the actual meeting are available for listening at SCAG's office.

1.0 Call to Order and Introductions

Mr. Doug Kim, LACMTA, called the meeting to order. Introductions were made.

2.0 Public Comment Period

There were no comments.

3.0 Consent Calendar

3.1 Approval of Meeting Minutes from February 16, 2006

The meeting minutes were approved.

4.0 Action Items

4.1 RTP Growth Forecast Assumptions

Mr. Frank Wen, SCAG, presented an overview of the draft regional baseline growth forecast methodology and assumptions. A handout was provided. The baseline forecast is a technical forecast without regional policy input, and is built upon the 2004 RTP baseline forecast, updated with recent growth trends and land use changes. The draft baseline forecast will be completed by June 2006, and will be the basis for policy-based growth scenarios that incorporate effects of growth visioning, economic initiatives, and the regional goods movement strategy. The forecast is developed in a collaborative process with input from the Regional Council and policy committees, TAC, panel of experts, subregions, and other major stakeholders.

Mr. Wen discussed the forecasting accuracy of SCAG's past population and employment projections. The TAC asked for county-level and directional (+/-) numbers.

Mr. Wen stated that the baseline forecast serves as a focal point for major policy discussions including growth visioning/land use, housing needs and policy, transportation/infrastructure investments, environmental justice, labor force/education/training, and globalization/economic competitiveness. Mr. Wen stated that there is a need to develop statistics to clarify the ratio between occupied housing units and households, which is currently assumed as one-to-one. This would benefit the region in terms of housing forecasts and planning for housing production. Mr. Wen stated that the baseline forecast also provides the basis for envisioning changes over the next 30 years in population age structure, ethnicity, and associated travel behavior, and what the implications are for regional planning.



PLANS & PROGRAMS TECHNICAL ADVISORY COMMITTEE

MINUTES for March 16, 2005

Mr. Wen stated that the separate population and employment projections are reconciled by a regional labor force analysis, where the civilian resident population affects the labor force participation rate, and the implied unemployment rate affects domestic in-migration and out-migration.

In response to a question regarding the base year, Mr. Wen stated that staff is using 2003 because the transportation model validation is based on 2003 ground counts (although staff will attempt to incorporate more recent data if time permits). The growth forecast can take advantage of 2005 data as it becomes available. Mr. Kevin Viera, WRCOG, requested the final base year numbers for Riverside.

Mr. Hsi-hwa Hu, SCAG, presented the methodology and assumptions for the employment forecast. The methodology is consistent with previous RTP growth forecasts, and starts with the U.S. employment projection. SCAG is using historical data from 1990 to 2005 at the 2-digit NAICS. The short-term (2006-2014) U.S. forecast is based on the BLS 2014 projection, which is 3 million lower than the BLS 2010 estimate used for the 2004 RTP. The long-term (2015-2035) U.S. forecast is derived using the Census population forecast to 2035 and assumptions/historical data on labor force participation rate (increased rates for age cohorts 55 and above), unemployment rate (5.17% average 1995-2005), and jobs/workers ratio (1.053, Jan. 2006 BLS).

Ms. Gail Shiomoto-Lohr, OCCOG, noted that for the 65 to 74 age cohort, in the 2004 RTP the 2030 labor force participation rate was 31.7%, and for the new RTP the rate is actually lower at 30.7%. Mr. Hu indicated staff would verify the numbers in the table.

Next, Mr. Hu stated that shift-share models are used to calculate SCAG's share of total U.S. employment. SCAG utilizes the California EDD 2005 Benchmark (1990-2005) wage and salary employment data. The self-employment rate is calculated using 2000 Census PUMS and CPS data. By 2035, SCAG's share of U.S. employment is projected to be 5.65%. The 2030 employment projection is 290,000 (2.9%) lower than what was assumed for 2030 in the 2004 RTP.

Mr. Bill Gayk, Riverside County TLMA, stated that the size of the labor force is in reality based upon the jobs available. However, in SCAG's long-term forecast the number of jobs are based upon the labor force. He asked what kinds of assumptions were made such that there will be a sufficient number of jobs available in the future to enable people to stay in the labor force. He also asked what assumptions were made regarding the regional economy such that SCAG would garner an increasing share of U.S. jobs. Mr. Hu acknowledged that there is an interaction between labor force and jobs, and labor force can be a constraint to the number of jobs. Historical data from 1995 to 2004 show an increase in SCAG's share of the U.S. forecast, and this trend is assumed to continue. Mr. Wen stated that contributing factors may include the performance of the technology and entertainment industries; international trade and immigration; our region's relative performance compared to the rest of the country in the face of the dot-com collapse and 9/11; and a relatively young and abundant labor force.



PLANS & PROGRAMS TECHNICAL ADVISORY COMMITTEE

MINUTES for March 16, 2005

Ms. Falan Guan, LACMTA, asked why only the last ten years of unemployment data were used. The State of the Region shows higher unemployment rates prior to 1985. Mr. Wen stated that the fluctuations in the early 1980s reflect a demographic and economic situation that is different than recent trends and what will likely be experienced in the next thirty years. Additionally, using the NAICS system limits our historical data to as far back as 1990.

Mr. Simon Choi, SCAG, presented the methodology and assumptions for the population and household forecast. SCAG utilizes the economic-demographic forecast method, which includes a cohort-component method and balances labor force supply with labor force demand. SCAG examines domestic in-migration and out-migration separately, enabling us to better capture demographic change. SCAG uses the headship rate method to develop the household projection. This method assumes that there is one household head per household/occupied housing unit. Headship rates are calculated by age, gender, and race/ethnicity, using 1980 to 2000 Census PUMS data.

Mr. Choi stated that recent data from the California Department of Finance (DOF) and Census Bureau have been used to update the 2004 RTP forecast. Key demographic assumptions include declines in fertility, mortality, and household headship rates, constant net immigration, and fluctuating net domestic migration depending on available jobs. Regarding undocumented immigrants, Mr. Choi stated that the Pew Hispanic Center has produced estimates since 2000. They estimated 8 million undocumented immigrants nationwide in 2000 and 11.5 to 12 million in March 2006. SCAG's share is estimated at 12.5%.

Mr. Choi stated that SCAG's population as a percentage of the state population is projected to be 48% in 2035, while the DOF estimates it to be 45%. This is in part due to the DOF's assumption that migration will be directed towards other parts of California rather than to the SCAG region. Mr. Choi indicated he would report back regarding where this migration was assumed to occur.

Ms. Tracy Sato, City of Anaheim, asked that the 2000 headship rates be provided.

Mr. John Stesney, LACMTA, asked why there were two different numbers shown for "persons per household" in 2030. Mr. Choi stated that the different numbers have different numerators (total population versus resident population, which excludes group quarters) and future presentations will be clarified. The 2005 household size, using total population, is about 3.2 and decreases to 3.1 by 2030. Using resident population, the 2005 household size is 3.1 and decreases to 3.0. In the 2004 RTP, the 2030 household size (using total population) is 3.06.

Mr. Gayk stated that the headship rates decline by about 3.6% between 1980 and 2000, and by 0.6% between 2005 and 2035. He noted that there is a high error rate in predicting headship rates. Mr. Choi stated that headship rate projection is based on past trends and possible changes of headship rates by age, gender, and race/ethnicity. The changing dynamics of age, gender, and race/ethnic composition of people influence the future change in overall headship rates. There is a movement to



PLANS & PROGRAMS TECHNICAL ADVISORY COMMITTEE

MINUTES for March 16, 2005

use a macrosimulation model (PROFAMY) to produce more accurate household projections.

Mr. Wen cautioned that while staff is asking for input on the methodology and assumptions, the results can still change due to additional input from the panel of experts, subregions, and counties.

The TAC recommended that SCAG staff return at the next meeting with an update on any refinements to the regional baseline forecast, as well as information to address the concerns expressed by the committee at today's meeting. The TAC would then act on the regional baseline forecast before moving on to the county-level disaggregation.

The TAC identified the following issues/concerns:

- Multiple households in an occupied housing unit
- A comprehensive table showing figures for the 2004 and 2008 RTP for all appropriate horizon years
- The causal relationship between jobs and labor force after 2014

5.0 Discussion Items

5.1 2005 State of the Region

Mr. Ping Chang, SCAG, presented highlights of the 2005 State of the Region report. A handout was provided. Mr. Chang noted that the effort was guided by a Benchmarks Task Force, and acknowledged the participation of TAC member Mr. Ty Schuiling of SANBAG.

The major findings of the report include the following:

- Fast population growth with major demographic transformations
- First meaningful job growth since 2000
- First gains in real per capita income and median household income since 2000
- Largest number of residential permits issued since 1989, but with record home prices and lowest level of housing affordability
- Continued highest level of congestion with carpooling share of work trips dropping by 3% since 2000 and corresponding increases in drive-alone commuting
- Continued exceeding federal air quality standards but with noticeable improvements in Ozone, PM10 and PM2.5 partly due to milder weather
- Little progress in student test scores and dropout rates but with improvements in educational attainment since 2000
- Continuing decline in violent crime rate but with first slight increase in juvenile felony arrest rate since 1990

In response to a question, Mr. Chang stated that trends are probably more important than a simple snapshot in time, and that is why the report includes historical data wherever possible to provide a trend analysis. Also importantly, the report provides a comparative perspective against other metropolitan regions during the similar period. Mr. Chang noted that over the last two years, at the national level we have seen a



PLANS & PROGRAMS TECHNICAL ADVISORY COMMITTEE

MINUTES for March 16, 2005

slight decline in highway fatalities, but the SCAG region has increased 8% at the same time.

Regarding the F for mobility, Mr. Richard Marcus, OCTA, asked if the grades could be presented for the counties separately. Mr. Chang noted that county-level data is provided where available, unfortunately the mobility data from the Texas Transportation Institute is not available at the county level. As for the report card itself, it is a regionwide report and therefore the grades are assigned at the regional level.

6.0 **Staff Report**

Mr. Philip Law, SCAG, stated that SCAG's 6th Annual Regional Housing Summit will be held on April 20. Registration is free and can be done on-line at SCAG's web site.

7.0 **Comment Period**

Mr. Ty Schuiling, stated that recent experience in putting together the strategic plan for San Bernardino County's new sales tax measure has shown that right-of-way costs have increased by 80%, utility relocation costs by 120%, construction costs by 90%, structural concrete and steel by 79% (on average between 2002 2005/6). This will have significant consequences for the next RTP. Mr. Naresh Amatya, SCAG, added that the federal agencies are requiring SCAG to have a better handle on project costs and how that affects the RTP financial constraint.

8.0 **Next Meeting Date & Adjournment**

The next meeting date was announced as April 20, 2006, and the meeting was adjourned.



PLANS & PROGRAMS TECHNICAL ADVISORY COMMITTEE

MINUTES for March 16, 2005

Attendance

Name	Agency
Grace Balmir	FHWA/FTA
Shefa Bhuiyan	Caltrans-District 8
Deborah Diep	CDR, CSU Fullerton
Viviane Doche-Boulos	DB Consulting
Kim Fuentes	South Bay Cities COG
Dana Gabbard	So. Calif. Transit Advocates
Bill Gayk	Riverside County TLMA
Falan Guan	LACMTA
Mark Herwick	County of Los Angeles
Katherine Higgs	SCAQMD
Jack Humphrey	Gateway Cities COG
Doug Kim	LACMTA
Deadra Knox	SCRRA
Richard Marcus	OCTA
Paula McHargue	LAWA
Miles Mitchell	LADOT
Tracy Sato	City of Anaheim
Eileen Schoetzow	LAWA
Ty Schuiling	SANBAG
Gail Shiimoto-Lohr	Orange County COG
Cheryl Stecher	Franklin Hill Group
John Stesney	LACMTA
Warren Teitz	MWD
Tony Van Haagen	Caltrans-District 7
Diana Watson	Caltrans-District 7

Via audio/video conference

Ben Cacatian	VCAPCD
Paul Fagan	Caltrans-District 8
Gary Green	Caltrans-District 8
Brian Kuhn	City of Palmdale
Ken Lobeck	RCTC
Charles Thomas	VCAPCD
Kevin Viera	WRCOG
Jeff Weir	CARB

SCAG Staff

Joseph Alcock	Rich Macias
Naresh Amatya	Annie Nam
Simon Choi	Alan Thompson
Hsi-hwa Hu	Brian Wallace
Philip Law	Frank Wen
Rongsheng Luo	



MEMO

DATE: April 18, 2006

TO: Planning & Policy Department, Plans & Programs Technical Advisory Committee

FROM: Frank Wen, Acting Lead Regional Planner (213) 236-1854, wen@scag.ca.gov
Simon Choi, Senior Regional Planner (213) 236-1849, choi@scag.ca.gov
Hsi-Hwa Hu, Senior Regional Planner (213) 236-1834, hu@scag.ca.gov
Kyuyoung Cho, Senior Visiting Scholar (213) 236-1915, cho@scag.ca.gov

SUBJECT: 2007/2008 RTP Baseline Forecasts: Methodology, Assumptions, and Draft Preliminary Results for the SCAG region Counties

SUMMARY:

This memo describes SCAG's methodology, process, and assumptions for the 2007/08 RTP baseline forecasts of population, households, and employment. Staff presented in March the *Draft Preliminary* forecasts of population, households, and employment for the region as a whole. The county distribution and associated assumptions and methodology will be presented to this Committee this month. In addition, staff will try to address the questions raised by TAC members in the March meeting.

Definition of "Baseline Forecast"

The Baseline Forecast is a pure technical growth forecast *without* regional policy input. Specifically, the Baseline Forecast for 2007/08 RTP will be a result of updating the 2004 RTP no-project growth forecasts with the current demographic and economic trends, the latest land use changes, newly approved regionally significant projects, general plan or specific plan update, and/or zoning revisions since 2002.

Following are lists of assumptions re SCAG 2007/08 RTP Preliminary Draft Baseline Forecasts of employment, population and households that staff are requesting inputs/comments from the P&P TAC.

Input/Comments on Methodology and Assumptions re SCAG 2007/08 RTP Preliminary Draft Baseline Employment Forecasts

U.S. Projection:

- Census population projection by age
- BLS projection of U.S. economy to 2014
- Labor force participation rates for older age cohorts
 - 55-64
 - 65-74
 - 75 and above
- Labor force participation rates for the rest age cohorts
- U.S. employment/unemployment rates
- U.S. double jobbing rates

MEMO

SCAG Region Forecasts:

- The self-employment rates
- The region's share of U.S. jobs

SCAG County Forecasts:

- SCAG region county share of regional total employment
- The role of labor force in determining share of job growth by county

Input/Comments on Methodology and Assumptions re SCAG 2007/08 RTP Preliminary Draft Baseline Population/Household Forecasts

1. SCAG Regional Population/Household Forecasts (2005-2035)
 - a. Fertility rate
 - b. Mortality rate
 - c. Net migration (domestic in-migration rate, domestic out-migration rate, international net migration)
 - d. Labor force participation rate
 - e. Double jobbing rate to determine labor force demand
 - f. Headship rate
2. SCAG County Population/Household Forecasts (2005-2035)
 - a. Fertility rate
 - b. Mortality rate
 - c. Net migration (domestic in-migration rate, domestic out-migration rate, international net migration)
 - d. Labor Force Participation Rate
 - e. Headship Rate
3. Linkage of Regional Forecasts and County Forecasts

Powerpoint presentation will be provided before the TAC meeting.

MEMO

SCAG FORECAST METHODOLOGY

SCAG population forecast is based on an economic-demographic (cohort component model) approach, considering trend extrapolation and other projections such as: the 2004 RTP No project Forecasts, DOF population projections (CA State & Counties), and US Census population projections (Nation & CA State). Once population forecast is determined, household forecast is derived from headship rates method.

The baseline employment forecast for the SCAG region utilizes a top down procedure—the shift/share methodology. Starting with a U.S. projection by industry sector, identify appropriate region share methodology for each of the NAICS-based sectors at national level. Once regional total jobs and jobs by NAICS sectors are determined, repeat the above exercises on county share of region jobs by sector, to get the county level job projections by industry sector. Finally, the employment forecasts will interact with the SCAG regional population forecast in order to ensure the balance between the job and population forecasts.

The following table shows the analysis about the performance of SCAG's regional forecasts. In general, SCAG's regional forecasts performed well compared to actual trends.

Forecasting Accuracy of SCAG Regional Population and Employment Projections: Mean Absolute Percentage Errors

	Projection Horizon			
	5 year	10 year	15 year	20 year
Population	4%	6%	12%	14%
Employment	8%	11%	14%	14%
Observations	8	7	5	4

Note: Mean Absolute Percentage Errors = Average of $|(\text{Projected} - \text{Estimated})| / \text{Estimated} * 100$

Sources:

SCAG90 (adopted in 1972)

D/E 2a (adopted in 1974)

SCAG, SCAG-76 growth forecast policy, Jan 1976 (adopted in December 1975)

SCAG, SCAG78 growth forecast policy (adopted in January 1979)

SCAG, SCAG82 growth forecast policy (adopted in October 1982)

SCAG, growth management plan (adopted in February 1989)

SCAG, growth forecast (adopted in June 1994)

SCAG, growth forecast (adopted in April 1998)

SCAG DEMOGRAPHIC FORECASTS – METHODOLOGY & ASSUMPTIONS

1. Population

- Top-down (region to county) & bottom-up (county to region)
- Methods
 - Economic-Demographic Methods
 - Cohort-component methods
- Other Projections
 - 2004 RTP No project Forecasts
 - DOF population projections (CA State & Counties)
 - US Census population projections (Nation & CA State)

1-1. Region

- Methods
 - Economic-Demographic Method
- Assumptions (compared to 2004 RTP No project forecast)
 - Fertility: to be adjusted downward
 - Mortality: to be adjusted downward
 - International Migration: to be adjusted upward
 - Domestic Migration: to be determined to be consistent with employment projection

1-2. County

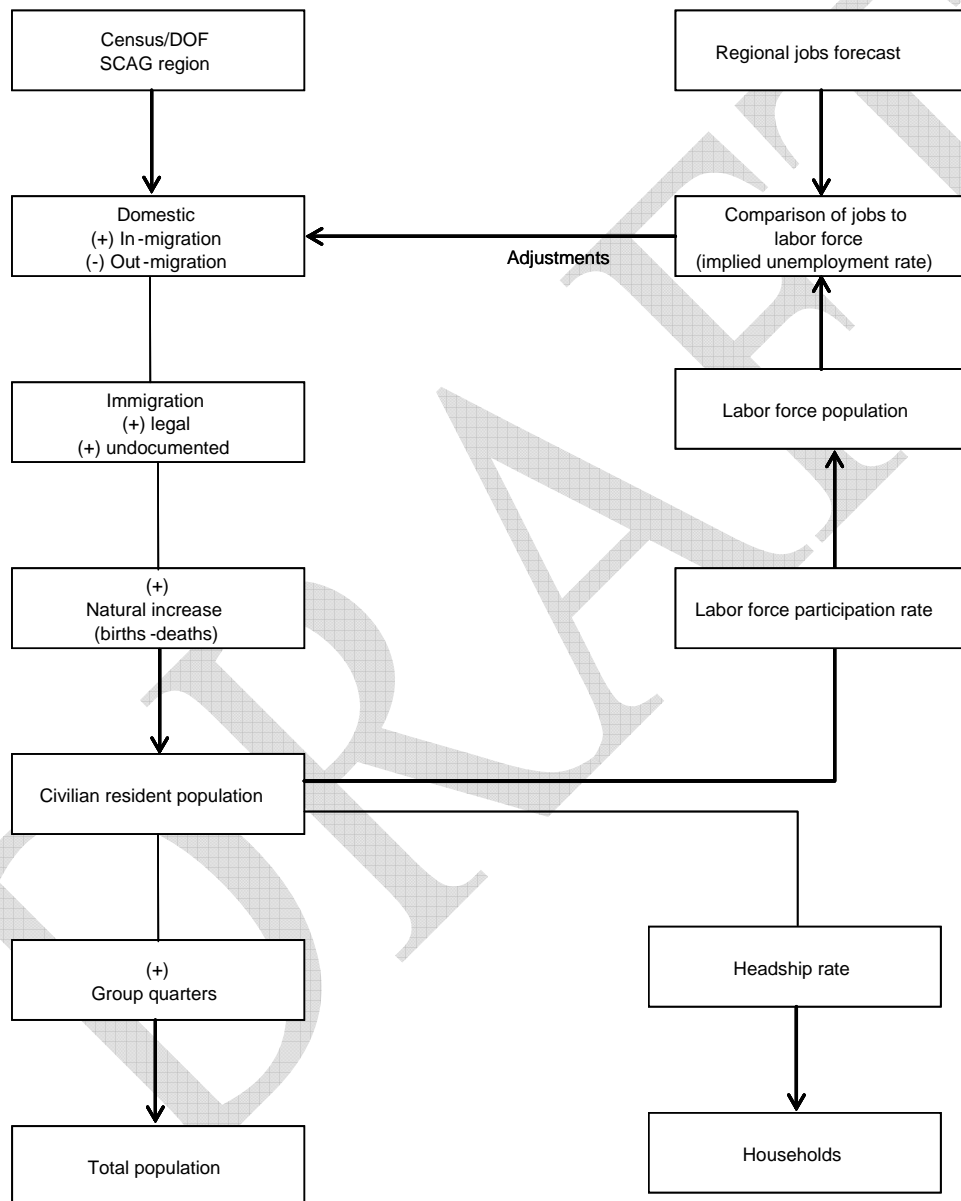
- Methods
 - Cohort Component Method
- Assumptions
 - Fertility: to be adjusted downward
 - Mortality: to be adjusted downward
 - International Migration: to be adjusted upward and constrained by the regional assumption. Using the annual average of 1990-2005 international net migration.
 - Domestic Migration: to be adjusted by the regional assumption. The county share of the regional domestic migration is adjusted by using available information below.
- Available information to affect total population & domestic migration:
 - DOF population projections (CA State & Counties)
 - US Census population projections (Nation & CA State)
 - 2004 RTP No project Forecasts
 - 2006 subregional input

2. Households

2-1. County

- Methods
 - Headship Rates Method
- Assumptions
 - Historical trends of male household headship rates
 - Historical trends of female household headship rates
 - Assimilation assumption of Asian: reduce 50% difference from 2000 Census White headship rates in 2050
 - Assimilation assumption of Hispanics: reduce 25% difference from 2000 Census white headship rates in 2050
- Available information to affect households:
 - DOF population projections (CA State & Counties)
 - US Census population projections (Nation & CA State)
 - 2004 RTP No project Forecasts
 - 2006 subregional input

Regional Baseline Population/Household Forecasts and Linkages to Employment Forecasts



SUMMARY OF BASELINE EMPLOYMENT FORECAST - METHODOLOGIES AND ASSUMPTIONS

The baseline employment forecast for the SCAG region utilizes a top down procedure starting with a U.S. forecast, followed by SCAG region, and finally six SCAG counties. In this summary, jobs and employment, all measured by place of work, are used interchangeably. The employment forecast will interact with the SCAG regional population forecast.

1. National Projections

The first step is to project the U.S. labor force based on projections of total population and labor force participation rates. Total jobs are projected from total labor force, unemployment rate, and the ratio of total jobs to employed residents. Total jobs are then projected to a two-digit industry code (NAICS) based on historical trends of the industry shares of U.S. total jobs.

- Data Sources
 - The population projections from the Census projection to 2035
 - New BLS (Bureau of Labor Statistics) job projections to 2014
 - BLS labor force participation rates
- Key Assumptions
 - Labor force participation rate: based on 2014 BLS estimates, adjusting the rate for three old age cohorts (55-64, 65-74, and 75+) based on 2004-2014 trends.
 - Overall labor force participation rate:
 - 2010: 65.8%
 - 2015: 65.3%
 - 2020: 64.4%
 - 2025: 63.4%
 - 2030: 62.8%
 - 2035: 62.2%
 - Unemployment rate: 5.17% (1995-2005 average)
 - The ratio of total jobs to employed residents: 5.3% (BLS January, 2006 estimate)
- Formula: total employment estimate:

$$LF_{(A,Y)} = POP_{(A,Y)} \times LFPR_{(A,Y)}$$

$$LF_{(Y)} = \sum_A LF_{(A,Y)}$$

$$WKER_{(Y)} = LF_{(Y)} \times (1 - UE.Rate_{(Y)})$$

$$EMPL_{(Y)} = WKER_{(Y)} \times (1 + MJ.Rate_{(Y)})$$

Y: Years

A: Age Cohorts

LF: Labor Force

POP: Population

LFPR: Labor Force Participation Rate

WKER: Worker

UE.Rate: Unemployment Rate

EMPL: Employment

MJ.Rate: Multiple Job-holder Rate

2. SCAG Region Forecasts

Based on shift-share model, SCAG region jobs for each projecting year are forecasted based on U.S. total jobs and the job share of SCAG to U.S, by each of 2-digit NAICS industries.

- Data Sources
 - Total employment (1990-2014) for the U.S. from BLS
 - Historical wage and salary data from California EDD (Employment Development Department) between 1990-2005
 - SCAG estimates of self employment: 8.4% - based on 2000 PUMS (Public Use Microdata Samples)
 - U.S. total jobs for each forecast years (2015-2035)
- Short-term Projection to 2014: Shift-Share Model
 - By each of 20 NAICS industries
 - SCAG/US Employment Share in 2014 = 5.4%
 - Six Industry Projection Methods:
 1. Change in Share
 2. Increment (Share of Growth)
 3. Average Share
 4. Constant 2005 Share
 5. Pop Growth
 6. Simple regression
- Long-term Projection to 2035: shift-share based on total employment
- SCAG/US Employment Share in 2035 = 5.7%

3. County Forecasts

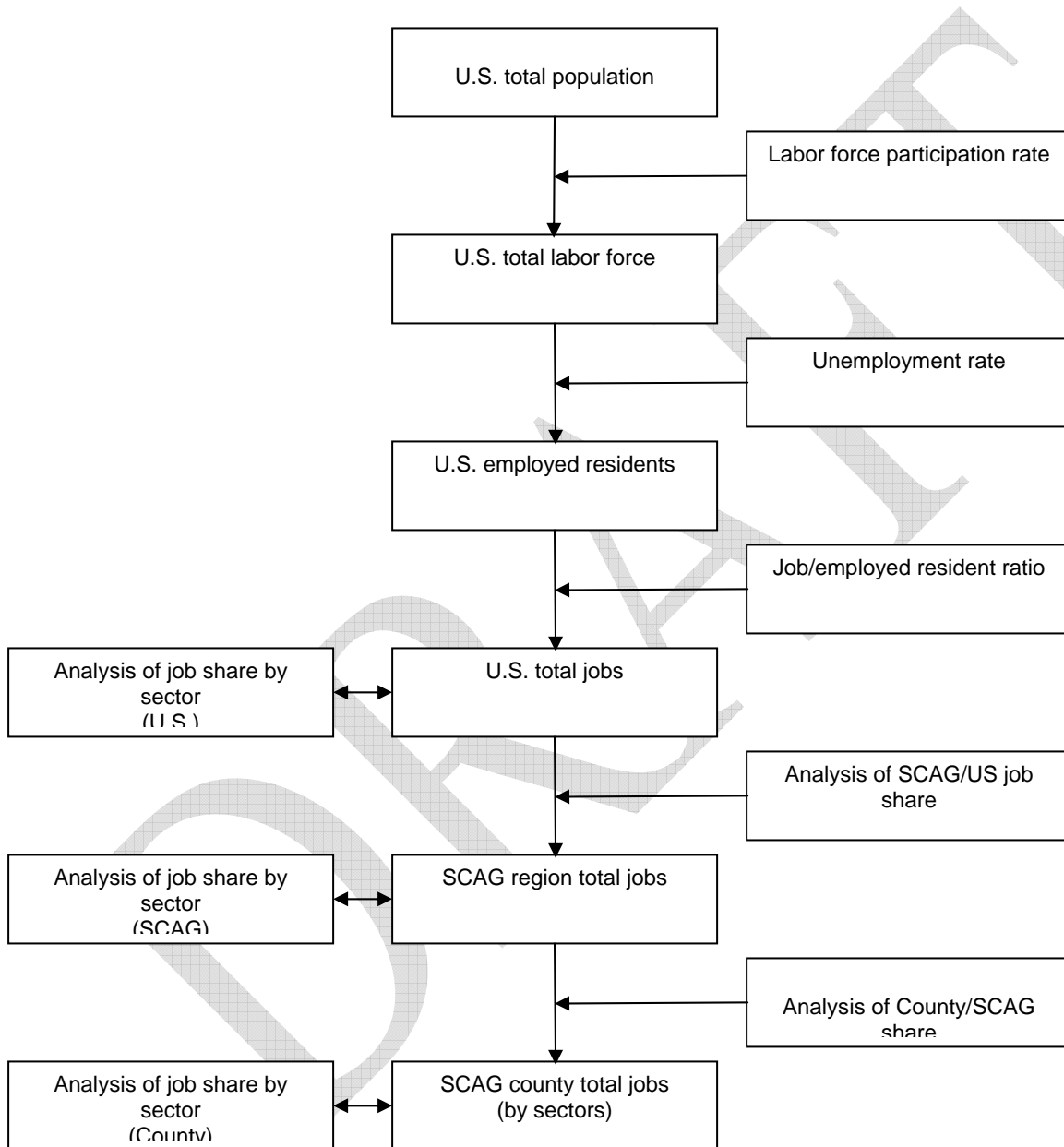
The historical data and methodology for county projection is the same as the procedure used for SCAG region projection. The projection utilizes a shift-share model for short-term projection by industries to 2014. A county to SCAG region growth share method is utilized for the long-term total employment projection (2015-2035). SCAG staff utilized the shift-share model to project 2014 employment for each of the six metropolitan areas of SCAG region: Imperial, Los Angeles, Orange, Riverside, San Bernardino, and Ventura.

MEMO

A new procedure was used this time to validate the appropriateness in using historical county shares as basis for projecting county share of jobs in the future. That is, identify key information with available projected value to assess whether past trend would replicate itself in the future. Staff found that labor force influenced job growth using historical data. Staff concluded that growth in labor force would influence job growth for the counties, and Los Angeles, Orange, and Ventura counties would have less job growth due to the relatively smaller labor force growth after 2020 than the other counties. Therefore, future labor force information was used to further adjust the job share of these counties to SCAG region job after 2020.

DRAFT

SCAG Employment Forecasts Methodology and Process



Forecasting Accuracy of SCAG Regional Population and Employment Projections: Mean Percentage Errors

	Projection Horizon			
	5 year	10 year	15 year	20 year
Population	-2%	-5%	-12%	-14%
(Positive Observations)	3	1	0	0
Employment	-2%	-4%	-11%	-14%
(Positive Observations)	3	3	1	0
Total Observations	8	7	5	4

Note: Mean Percentage Errors = Average [(Projected - Estimated) / Estimated] *100

Sources:

SCAG90 (adopted in 1972)

D/E 2a (adopted in 1974)

SCAG, SCAG-76 growth forecast policy, Jan 1976 (adopted in December 1975)

SCAG, SCAG78 growth forecast policy (adopted in January 1979)

SCAG, SCAG82 growth forecast policy (adopted in October 1982)

SCAG, growth management plan (adopted in February 1989)

SCAG, growth forecast (adopted in June 1994)

SCAG, growth forecast (adopted in April 1998)

County Share of Projected Population, 2005 vs. 2035

Rank	County name	2005	2035	Change in the County Share
1	Riverside	5%	7%	1.82%
2	Sacramento	4%	5%	1.10%
3	San Joaquin	2%	3%	0.90%
4	San Bernardino	5%	6%	0.54%
5	Contra Costa	3%	3%	0.45%
6	Kern	2%	2%	0.42%
7	Fresno	2%	3%	0.38%
8	Placer	1%	1%	0.33%
9	Merced	1%	1%	0.30%
10	Tulare	1%	1%	0.30%
11	Solano	1%	1%	0.27%
12	Stanislaus	1%	2%	0.21%
13	Yolo	1%	1%	0.16%
14	Sonoma	1%	1%	0.15%
15	Imperial	0%	1%	0.12%
16	Madera	0%	0%	0.10%
17	Kings	0%	0%	0.09%
18	Alameda	4%	4%	0.07%
19	Shasta	0%	1%	0.06%
20	El Dorado	0%	1%	0.05%
21	Napa	0%	0%	0.03%
22	Yuba	0%	0%	0.03%
23	Calaveras	0%	0%	0.03%
24	Sutter	0%	0%	0.03%
25	San Diego	8%	8%	0.02%
26	San Benito	0%	0%	0.02%
27	Nevada	0%	0%	0.02%
28	Lake	0%	0%	0.01%
29	Colusa	0%	0%	0.01%
30	Monterey	1%	1%	0.00%
31	Alpine	0%	0%	0.00%
32	Sierra	0%	0%	0.00%
33	Mono	0%	0%	0.00%
34	Mariposa	0%	0%	0.00%
35	Glenn	0%	0%	-0.01%
36	Tehama	0%	0%	-0.01%
37	Modoc	0%	0%	-0.01%
38	Trinity	0%	0%	-0.01%
39	Amador	0%	0%	-0.01%
40	Del Norte	0%	0%	-0.01%

41	Inyo	0%	0%	-0.01%
42	Plumas	0%	0%	-0.02%
43	Tuolumne	0%	0%	-0.02%
44	Lassen	0%	0%	-0.02%
45	Butte	1%	1%	-0.03%
46	Mendocino	0%	0%	-0.03%
47	Siskiyou	0%	0%	-0.03%
48	San Luis Obispo	1%	1%	-0.04%
49	Humboldt	0%	0%	-0.07%
50	Santa Cruz	1%	1%	-0.12%
51	Santa Barbara	1%	1%	-0.19%
52	Marin	1%	0%	-0.19%
53	Ventura	2%	2%	-0.20%
54	San Mateo	2%	2%	-0.32%
55	Santa Clara	5%	4%	-0.34%
56	San Francisco	2%	2%	-0.60%
57	Orange	8%	7%	-0.94%
58	Los Angeles	28%	23%	-4.80%

Source: State of California, Department of Finance, *Race/Ethnic Population with Age and Sex Detail*,
2000–2050. Sacramento, CA, May 2004.

Household Headship Rates by Race/Ethnicity, 2000

White (NH)	51.2%
Black (NH)	49.1%
Asian & Others (NH)	38.7%
Hispanic	34.2%
Total	43.1%

Source: US Census Bureau, PUMS 5%

Draft 2006 Long-Range Transportation Plan

SCAG, Planning & Programming TAC

April 18, 2006



Goals

- Improve Mobility
- Protect our transportation resources
- Enhance quality of Life

How the Plan was developed

- Public input - focus groups & polling
- Local Agency dialog - (elected officials, public works directors, and city managers)
- Technical analysis
- Board of Directors' policy direction in October 2004 and April, May, and June 2005

Alternatives Studied

- Balanced Plan Alternative - focuses on what can be accomplished with a Measure M extension
- Constrained Alternative - considers what we can do with available funds and sunset of Measure M in 2011
- Unconstrained alternative provides a future vision without regard to funding

Improvements primarily within existing freeway rights-of-way



Roadway Plan

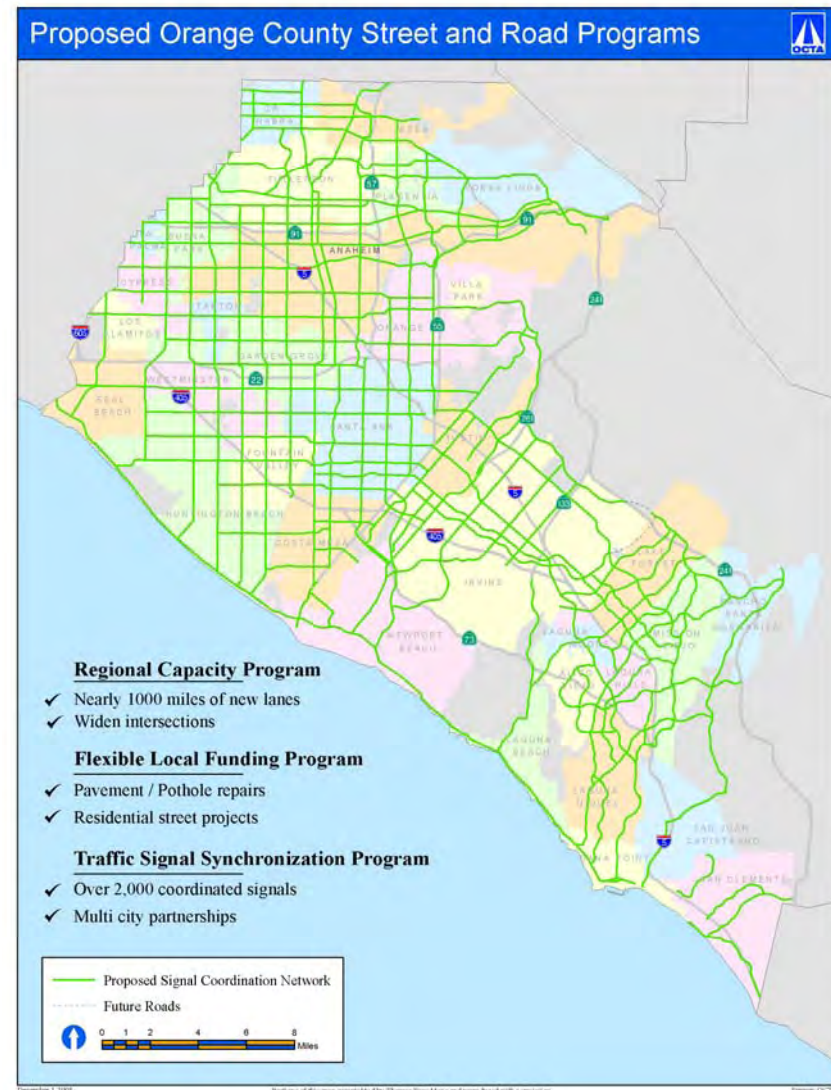
Coordinates more than
2,000 signals countywide

Expands street capacity at
major bottleneck locations

Improves pedestrian
safety

Separates road and rail
traffic with key grade
separations

Doubles local funding to
fix streets



Transit Plan

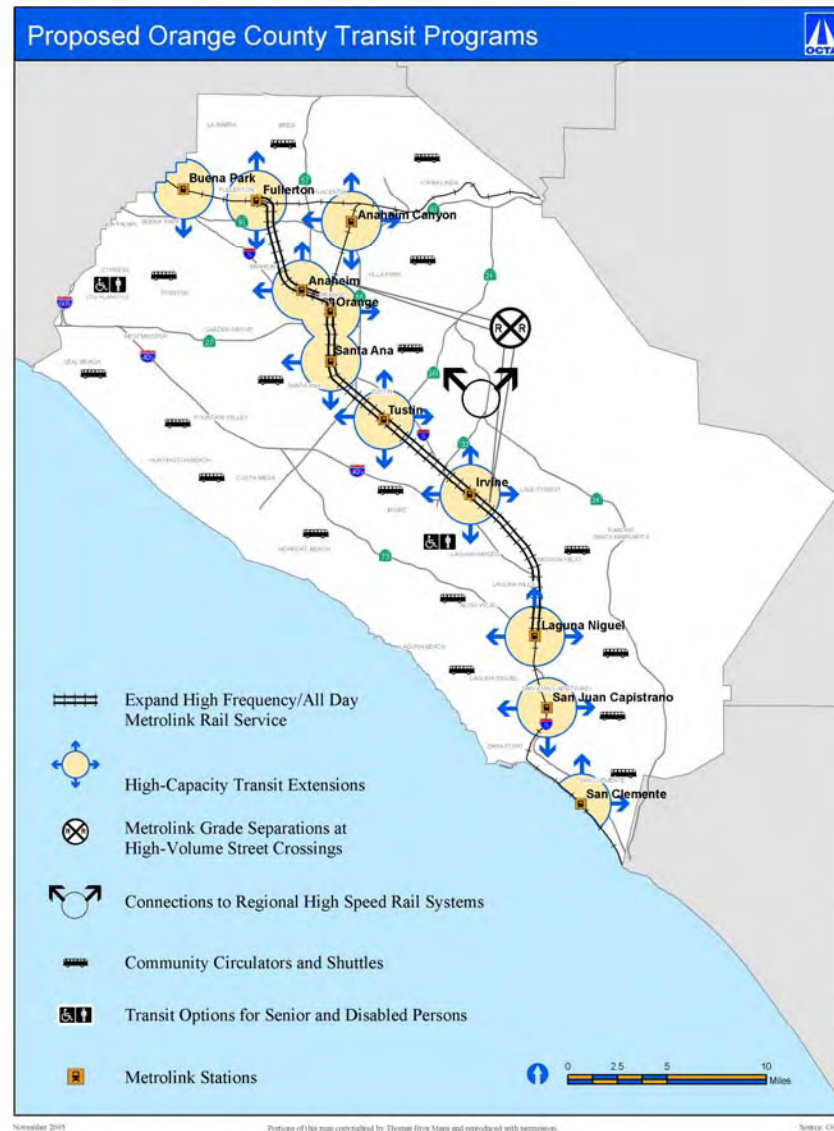
Expands commuter rail system

Provides new transit connections from commuter rail stations

Connects rail service to new regional systems

Maintains low bus fares for seniors / disabled

Expands community-based shuttles



Plan Performance

- Reduces vehicular daily delay by 34 percent
- Improves AM freeway and roadway speeds by 23 and 28 percent
- Increases transit ridership by 26 percent

Next Steps

- Complete public review period currently underway
- Assess input and develop a Final Draft in April 2006
- Finalize plan and EIR by June 2006
- Work with SCAG to incorporate into next Regional Transportation Plan

Southern California Association of Governments



System Performance Measures

Goals, Policies, and Performance Measures

System Metrics Group, Inc.

2004 RTP Goals ...

Adopted 2004 RTP Goals

- 1 Maximize **mobility** and **accessibility** for all people and goods in the region
- 2 Ensure travel **safety** and **reliability** for all people and goods in the region
- 3 **Preserve** and ensure a **sustainable** regional transportation system
- 4 Maximize the **productivity** of our transportation system
- 5 Protect the **environment**, improve air quality and promote energy efficiency
- 6 Encourage **land use and growth patterns** that complement our transportation investments

2004 RTP Policies ...

Adopted 2004 RTP Policies

- 1 *Transportation investments shall be based on SCAG's adopted Regional Performance Indicators.*
- 2 *Ensuring safety, adequate maintenance, and efficiency of operations on the existing multi-modal transportation system will be RTP priorities and will be balanced against the need for system expansion investments.*
- 3 *RTP land use and growth strategies that differ from currently expected trends will require a collaborative implementation program that identifies required actions and policies by all affected agencies and sub-regions.*
- 4 *HOV gap closures that significantly increase transit and rideshare usage will be supported and encouraged, subject to Policy #1.*
- 5 *Progress monitoring on all aspects of the Plan, including timely implementation of projects, programs and strategies, will be an important and integral component of the Plan.*

Possible issues ...

- Do we need to include language to address security to address SAFETEA-LU requirements? Note that the new requirements now split safety and security.
- Do we need to address non-motorized specifically (note that we tried to stay away from modal-specific goals or policies)
- How should we address the environmental mitigation requirements?
 - *Plan must include “a discussion of types of potential environmental mitigation activities and potential areas to carry out these activities...”*
- What about the statewide safety plan? Do we need a specific policy for integrating with or influencing this effort?
- We addressed many aspects of operations and management in the 2004 RTP. Do we need any additional emphasis?
 - *Plan must identify “operational and management strategies to improve the performance of existing transportation facilities to relieve vehicular congestion and maximize the safety and mobility of people and goods.”*
- Other?

We also need to look at the performance measures and update/revise them if needed

- **Do we need additional performance measures to address new requirements**
- **Some have suggested that we need freight specific performance measures. Which ones, if any, should we consider?**
- **Any other changes?**

Performance Indicators, Measures and Outcome			
Performance Indicator	Performance Measure(s)	Definition	Performance Outcome
Mobility	<ul style="list-style-type: none"> Average Daily Speed Average Daily Delay 	<p><u>Speed</u> - experienced by travelers regardless of mode</p> <p><u>Delay</u> - excess travel time resulting from the difference between a reference speed and actual speed. Total daily delay and daily delay per capita are the indicators used.</p>	11% improvement 37% improvement
Accessibility	<ul style="list-style-type: none"> Percent PM peak period work trips within 45 minutes of home Distribution of work trip travel times 		Auto: 90% Transit: 35% Auto: 7% improvement Transit: 6% improvement
Reliability	<ul style="list-style-type: none"> Percent variation in travel time 	Day-to-day change in travel times experienced by travelers. Variability results from accidents, weather, road closures, system problems and other non-recurrent conditions.	10% improvement
Safety	<ul style="list-style-type: none"> Accident Rates 	Measured in accidents per million vehicle miles by mode.	0.5 % improvement
Cost Effectiveness	<ul style="list-style-type: none"> Benefit-to-Cost (B/C) Ratio 	Ratio of benefits of RTP investments to the associated investment costs.	\$3.73
Productivity	<ul style="list-style-type: none"> Percent capacity utilized during peak conditions 	<p>Transportation infrastructure capacity and services provided.</p> <ul style="list-style-type: none"> Roadway Capacity - vehicles per hour per lane by type of facility. Transit Capacity - seating capacity utilized by mode. 	20% improvement at known bottlenecks
Sustainability	<ul style="list-style-type: none"> Total cost per capita to sustain current system performance 	Focus is on overall performance, including infrastructure condition. Preservation measure is a sub-set of sustainability.	\$20 per capita, primarily in preservation costs
Preservation	<ul style="list-style-type: none"> Maintenance cost per capita to preserve system at base year conditions 	Focus is on infrastructure condition. Sub-set of sustainability.	Maintain current conditions
Environmental	<ul style="list-style-type: none"> Emissions generated by travel 	Measured/forecast emissions include CO, NOX, PM10, SOX and VOC. CO2 as secondary measure to reflect greenhouse emissions	Meets conformity requirements
Environmental Justice	<ul style="list-style-type: none"> Expenditures by quintile and ethnicity Benefit vs. burden by quintiles 	<p>Proportionate share of expenditure in the 2004 RTP by each quintile</p> <p>Proportionate share of benefits to each quintile ethnicity</p> <p>Proportionate share of additional airport noise by ethnic group</p>	No disproportionate impact to any group or quintile